Reprogramming human stem cells for blood cell generation

Grant Award Details

Reprogramming human stem cells for blood cell generation

Grant Type: Inception - Discovery Stage Research Projects

Grant Number: DISC1-10074

Project Objective:

To create a universal donor blood cell line that can be used to produce human red blood cells for transplantation

Investigator:

Name:	Tannishtha Reya
Institution:	University of California, San Diego
Type:	PI

Disease Focus: Blood Disorders

Human Stem Cell Use: Adult Stem Cell

Award Value: $210,060

Status: Active

Grant Application Details

Application Title: Reprogramming human stem cells for blood cell generation

Public Abstract:	**Research Objective** To create a universal donor blood cell line that can be used to produce human red blood cells for transplantation. **Impact** Successful completion of this work would create a safe, unrestricted source of universal donor human blood cells that could be used to improve healthcare and save lives throughout the world. **Major Proposed Activities** • Aim 1: Development of a human donor blood cell line by introduction of the appropriate signals into stem cells • Aim 2: Induce the human donor blood cell lines to produce red blood cells
Statement of Benefit to California:	Because this research will lead to the development of methods to address the critical shortage of universal donor blood for transfusions, the State of California and its citizens will directly benefit. California-based military personnel stationed elsewhere will also benefit from this resource. Importantly, in emergency situations, it will not be necessary to obtain blood test results to identify the recipient's blood type, thus expediting access to treatment and improving patient outcomes.

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